



NICHD MICROSCOPY & IMAGING CORE: Rules of Use

Instructions:

Read thoroughly. Pay special attention to the **highlights in red**.

If you are a summer student / visitor, Principal Investigator (PI) must complete section **1**.

If you are not within any of the PNRC Institutes, your PI must complete section **2**.

Everyone must complete section **3**,

Sign and return to Vincent Schram, B.35A/GD931, 301-496-6419.

General

1) The NICHD Microscopy & Imaging Core (M.I.C.) is open to investigators from all institutes represented in PNRC.

2) Training by the MIC staff is required before using any equipment.

3) Time on the equipment must be reserved in advance on the M.I.C. calendar:

<https://facility.ninds.nih.gov/public/facilitylogin.aspx>

Notify staff as soon as possible if you need to cancel your appointment.

4) Some of our equipment and Electron Microscopy (EM) services incur a fee, as follows:

Nikon Spinning Disk/Storm/TIRF: \$40 / hour

Zeiss LSM 510 inverted: \$20 / hour

Zeiss LSM 510 upright two-photon: \$25 / hour

Zeiss LSM 780 inverted: \$40 / hour

EM: \$120 / specimen

5) **Food and beverages are not permitted in the facility.**

6) No modification to the instruments permitted without prior approval from the staff. Use and storage of non MIC-owned accessories subject to pre-approval.

7) Users provide their own basic equipment and reagents (dyes, coverslips, media, etc...).

8) Users are not to adjust acquisition / imaging software parameters that would impact other users. Contact staff if adjustments need to be made.

9) Users are responsible for thoroughly cleaning the equipment after each session, including perfusion chambers, manifold / valves / pump tubing, vacuum trap, workbench and computer workstations. Oil immersion objectives must be wiped clean with optical lens paper only. Water objectives must be rinsed with water and wiped clean with optical lens paper only. **Objective cleanliness is strictly enforced!**

10) Usage time for each instrument must be recorded in the instrument's logbook.

12) Users are responsible for contacting the staff to request support, or in case of instrument damage or malfunction.

13) **Investigators must acknowledge the MIC in publications.**

Chemicals & Biohazards

1) Chemicals: the PI must notify us in advance of planned use of any hazardous chemicals.

2) Radioactive materials are absolutely prohibited in the facility.

3) Biohazard: Use of live viruses, infectious material or any unconventional live organisms must be cleared with the staff in advance of EACH planned experiment. Users are fully responsible for cleaning and disinfecting the equipment, including (but not limited to): rinse all contaminated surfaces with a dilute Clorox solution, dispose of live cells, media, Petri dishes and gloves in an MPW box (GD734), empty and disinfect all vacuum traps, remove tissue slices and animal remains from the facility at the end of the experiment.

Chemical & Biohazard rules violation will result in immediate exclusion from the facility!

Time Use Policy

In case of heavy usage, we may have to enforce some rules to insure every investigator has equal access to our equipment, according to the following guidelines:

1) No reservation more than 2 weeks in advance.

2) Maximum of 8 hours / week per laboratory per microscope during regular business hours (8am-6pm Mon-Fri).

3) No day-long reservations allowed except for live cell or live animal work.

Currently, only the Zeiss LSM 510 inverted is subject to these rules.

Data Storage and Computer Use

- 1) Storage space on computers running each microscope is limited. Remove data from our computers as soon as possible. We may erase data left on individual computers without notice.
 - 2) Upon request, each user may obtain some storage space on the facility file server "nichdmic.nichd.nih.gov".
 - 3) **Do not rely exclusively on the server for data safekeeping!** Users should store a second copy of their data.
 - 4) **Recreational internet browsing is not allowed on any of the MIC computers.**
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Live Cells / Tissue Imaging

Live cell imaging involves circulation of saline solutions in close proximity to optical and electronic equipment. To minimize the occurrence of leaks and their disastrous consequences, all users must comply with the following rules:

- 1) Perfusion system must be checked for leaks by running it for at least 5 minutes before insertion on a microscope stage.
 - 2) **Open perfusion chambers must not be left unattended with the pump running.**
 - 3) During a live experiment, microscope objectives, objective carousel and microscope stand must be checked for leak every 15 minutes, and then extensively inspected at the end of the experiment. Immediately report any leak to the staff.
 - 4) All perfusion lines, valves and manifold are to be thoroughly rinsed after use with distilled water, ethanol, then air-dried. Unclamp all tubing from the peristaltic pump heads. Clean vacuum traps with diluted Chlorox.
 - 5) Users must indicate in the logbook a "live experiment" was performed on the microscope.
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After-Hours Access

In the absence of managing staff, use of M.I.C. equipment outside regular business hours and during weekends and holidays has special implications for the equipment integrity and the quality of data collected. Perfusion experiments are absolutely prohibited after hours, and live imaging (without perfusion) requires prior approval. **After-hours privileges will be revoked at the first sign of abuse or neglect!**

Summer Students / Visitors

Given the large disparity in the level of proficiency of visitors and students, decisions are made on a case-by-case basis:

- 1) Depending on staff availability, training may not be provided.
- 2) **An authorized facility user must be present at all times.**
- 3) Only fixed specimen imaging allowed.

By signing below, the principal investigator agrees to compensate the MIC for repair costs consequential to gross negligence or abuse:

1 PI name: _____ Phone number: _____ Signature: _____

Investigators outside of PNRCII

The MIC is open to Investigators from Institutes outside of the PNRC on a limited basis. Please contact us for details. By signing below the principal investigator agrees to compensate the MIC for repair costs consequential to gross negligence or abuse?

2 PI name: _____ Phone number: _____ Institute: _____
Institute: _____

Reminders

Reservations:

If you need training or assistance, coordinate with M.I.C. staff in advance.
Let us know ASAP if you need to cancel your reservation.

Instrument use:

Immediately report any problem, even minor ones.
No perfusion / live imaging after hours.
After use, carefully wipe clean all oil objectives with lens paper only.
Unless the next user is physically present, always shut down lasers, mercury lamp and microscope after use.

Miscellaneous:

No biohazards / toxic chemicals without pre-approval by the staff.
No food, drink or radioactivity in the facility.
No recreational internet browsing on our computers.

Contacts

Confocal imaging, image analysis, server issue, card key access:

Vincent Schram: Building 35A, Room GD931. Phone: 301-496-6419.
schramv@mail.nih.gov Pager: Dial 102, 11327, your phone number

Sample preparation, immunostaining, rodent perfusion, confocal imaging:

Lynne Holtzclaw: Building 35A, Room GD931. Phone: 301-451-6610
holtzcell@mail.nih.gov Pager: Dial 102, 10016, your phone number.

All Electron Microscopy issues:

Chip Dye: Building 35A, Room GD920. Phone: 301-496-3627
dye@mail.nih.gov

MIC web site: <http://mic.nichd.nih.gov>

Reservations: <https://facility.ninds.nih.gov/public/facilitylogin.aspx>

3

To be completed by each user

I, _____, have read and understood these rules, and agree to use M.I.C. equipment only in accordance to these terms. Signature: _____

Last Name: _____ Middle Name: _____ First Name: _____

Email: _____ Phone: _____ - _____ - _____ ID #: _____ - _____ - _____

Building: _____ Room: _____ Supervisor: _____